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Abstract

Inter-firm communication through advanced technology such as the internet, adds value to supply chain organisations through speed of information transference at a lower cost than traditional communication modes. However, the sharing of sensitive market information relies upon a strong inter-organisational relationship presence, displaying intangible qualities such as trust and commitment. These value added relational based characteristics are not as yet easily measured. This paper introduces and explains the concept of measuring value added along the supply chain from a transfer pricing perspective. This non-conventional supply chain (value-chain) perspective invites the reader to consider measuring added value as it moves between organisations using a model which encourages congruent behaviour between supply chain partners. A proposed model adapted from the Balanced Score Card model (Kaplan and Norton, 1996) provides a tool to measure tangible and intangible value between firms using transfer pricing. It is argued that embracing and appropriately engaging with this model will enable organisations to better measure intangible inter-organisational relationship qualities, thus providing organisations with the confidence to exchange sensitive information through mechanisms like the internet as a means of enhancing supply chain performance.

Keywords

transfer, pricing, apparatus, for, measuring, value, added, along, supply, chain, Reflections, for, internet, based, inter, organisational, relationships

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A Transfer Pricing Apparatus for Measuring Value Added along the Supply Chain: Reflections for Internet based Inter-Organisational Relationships

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Abstract

Inter-firm communication through advanced technology such as the internet, adds value to supply chain organisations through speed of information transference at a lower cost than traditional communication modes. However, the sharing of sensitive market information relies upon a strong inter-organisational relationship presence, displaying intangible qualities such as trust and commitment. These value added relational based characteristics are not as yet easily measured. This paper introduces and explains the concept of measuring value added along the supply chain from a transfer pricing perspective. This non-conventional supply chain (value-chain) perspective invites the reader to consider measuring added value as it moves between organisations using a model which encourages congruent behaviour between supply chain partners. A proposed model adapted from the Balanced Score Card model (Kaplan and Norton, 1996) provides a tool to measure tangible and intangible value between firms using transfer pricing. It is argued that embracing and appropriately engaging with this model will enable organisations to better measure intangible inter-organisational relationship qualities, thus providing organisations with the confidence to exchange sensitive information through mechanisms like the internet as a means of enhancing supply chain performance.

Keywords: Measuring value added; Transfer pricing; Tangible / Intangible value; Performance; Internet; Communication; Supply Chain

Introduction

Supply chains by nature and definition require organisations to work together in close relationships with the intention of adding value to the end customer (Handfield and Nichols, 2002). Coordinated relationships are essential for supply chain success and the need for reliable inter-organizational communication to effectively manage these buyer/ seller relationships is well supported (Mohr and Nevin, 1990; Mohr and Spekman, 1994; Knemeyer and Murphy, 2004). Information has been firmly identified as the glue that holds together the structure of all businesses (Lord and Collins, 2002) because it creates closer relationships.. These closer relationships require inter-firm participation which further enables open transference of information between firms in the pursuit of opportunities to improve organisational performance (Langfield-Smith and Smith, 2005). Electronic commerce has changed the way organisations communicate. Several examples of technology enhanced communication in the supply chain include electronic data interchange (EDI), “the most widely used technology for broadcasting demand data from the customer” (Harrison and van Hoek, 2002, P178) and the Internet (Archer and Yuan, 2000; Croom, 2000), which provides similar facilities at lower costs (Harrison and van Hoek, 2002). These electronic linkages in the supply chain have had an instrumental effect in changing the nature of these relationships by enabling chain members to participant in multi-functional interactions (McIvor and Humphreys , 2001). Whilst internet technologies enhance end-to-end integration by fusing together extended enterprises inside the value chain (Tapscott, Ticoll and Lowy, 2000), the question remains as to whether these relationships are value adding to each other and the supply chain to which they participate? Therefore an apparatus is needed to measure supply chain relationships as a mechanism for transference of intangible values generated within these relationships, such as trust and commitment.

One of the principle challenges in the operation of a decentralised system (supply chain) is to devise a satisfactory method of accounting for the transfer of goods and services from one responsibility centre to another (Anthony and Govindarajan, 2004). One accepted method of measuring value within the organisation is called transfer pricing (Langfield-Smith and Smith, 2005). While the concept of transfer pricing itself receives regular recognition, the management framework for transfer pricing

within a supply chain context is generally underdeveloped. The key objective of this research is to provide a convergence between these areas (transfer pricing and supply chains) with a focus on how value added (both tangible and intangible) can be transferred along the supply chain. In order to explore these areas, develop an understanding and structure a framework for measuring value added along the supply chain it is necessary to investigate the relevant literature.

Literature Review

In developing the conceptual basis for supply chains, Handfield and Nichol (2002, p.8), define them as including “all organisations and activities associated with the flow and transformation of goods from the raw materials stage, through to the end user, as well as the associated information flows.” Information sharing is identified as a key driver for improving supply chain performance and enhancing competitive advantage (Zhang and Li, 2006). This is being embraced through organisations recently exploring opportunities to use internet, intranet, and extranet to exchange data, information and knowledge along the supply chain (Zhang and Li, 2006). The internet provides firms a mechanism to exchange information and data more rapidly than traditional communication methods (Bird, 2000) and at a lower cost than more common communication modes in supply chains such as electronic data interchange (EDI) or fax. This also has the added flexibility of customizing specific information for individual trading partners (Cai, Jun, and Yang, 2006). Therefore, the potential value of the internet to supply chain participants is in its ability to provide fast, flexible real time access to large quantities of relevant information (Lord and Collins, 2002; Lancioni et al., 2000; Shapiro and Varian, 1999; Jonsson and Gunnarsson, 2005). Organisations participating in this type of exchange require a high level of connectedness (Dutta and Segev, 1999). The acceptance of the importance of information exchange in influencing supply chain performance drives the widely accepted notion of supply chains as value chains.

This alternative perspective of viewing supply chains as value chains, identifies economic value as being added through coordinated management of the flow of physical goods and information at each stage of the chain (Davis, Leibtag, Martinez and Stewart, 2004). The concept of value chains is described by Porter (1985) as a

categorization of the generic value-adding activities within an organization, including; primary activities: inbound logistics, production, outbound logistics, sales, marketing, service, maintenance, and support activities: procurement, technology development (research and development), human resource management and firm infrastructure.

From a value chain perspective the supply chain concept provides a systematic method of categorizing all the activities a firm performs. How they interact with one another (Mintzberg, Ahlstrand and Lampel, 1998) and further, how each activity adds value to the product or service for the end user. Additionally supply chains can be characterised as value systems and are defined as “a connected series of organisations, resources and knowledge streams involved in the creation and delivery of value to the end customer” (Handfield and Nichols, 2002, p.11).

The integration of the value system approach into supply chains requires an extension of management’s line of sight. This is required in order to understand the elements and sources of supply chain performance and the contribution of each supply chain participant to its overall effectiveness. Handfield and Nichols (2002, p.8) noted the importance of value systems in their definition of Supply Chain Management (SCM) suggesting that “SCM is the integration and management of supply chain organisations and activities through cooperative organisational relationships, effective business processes, and high levels of information sharing to create high-performing value systems that provide member organisations with a sustainable competitive advantage”.

Simchi-Leive, Kaminsky and Simchi-Leive (2003) suggest that the SCM process revolves around efficient integration of all value adding partners and encompasses the firm’s activities at many levels. The integration of supply chain processes throughout all activity levels of organisations fosters the emergence of the value system in supply chains, highlighting the importance of effective management in all areas of the supply chain in order to add value. This research proposes that transfer pricing is an area where effectiveness and efficiency within supply chains can be achieved.

Transfer Pricing

Transfer pricing is a response to decentralised organisational structures under which “responsibility centres trade amongst themselves” (Grabski, 1985, p.33). This is defined as the price paid in a business transaction, whether for; tangible property, intellectual property or the provision of services – between companies under related party control (Abdallah, 2004). The transfer price of these tangible and intangible resources is becoming an important issue in international supply chains, as decisions on policies to guide pricing decisions become increasingly complicated (Abdallah, 2004). Complications which arise are in part, from difficulties involved in measuring the intangible value inherent in transfers.

The objectives of the transfer pricing function are:

1. To preserve or maintain divisional autonomy.
2. To encourage divisions to achieve central management optimal results.
3. To allow or provide a measure of divisional (product) performance that would lead to long run optimal decisions (Grabski, 1985, p.35).

Encouraging divisions to be autonomous while providing optimal results for central management can increase opportunistic behaviour. This results in transfer prices that may not reflect the true value added by that supply chain partner, thereby negating the objectives of divisional autonomy and optimal decision making. In acting opportunistically, divisions may increase their divisional efficiency at the expense of the efficiency of the entire network in which they operate. The key to transfer pricing is therefore to implement a system in which supply chain partners “act in ways that increase not only their own efficiency, but the efficiency of the entire network in which they operate” (Cooper and Slagmulder, 2003, p.14).

The goal of transfer pricing (often forgotten) is to maximize the value of the corporation (Michaels, 2005). The internal goals of a transfer pricing system include performance evaluation of subsidiaries and their managers, motivation and goal (behavioural) congruence (Abdallah, 2004). The achievements of these goals are contingent on several factors; a key area being the measurement of value and the management of transfer pricing within the supply chain.

Transfer pricing is often a significant component used in assessing performance within large segmented firms. Langfield-Smith and Smith (2005), discuss the importance of developing appropriate performance measures in order to improve supply chain performance (efficiency). Recent efforts to measure supply chain performance are underdeveloped (Langfield-Smith and Smith, 2005). They contribute to the challenges involved in designing a transfer pricing system that discourages opportunistic behaviour of supply chain partners in the measurement of value added and the setting of transfer prices.

The inclusion of transfer pricing in performance measurement systems encourages congruent behaviour between divisions in the setting of transfer prices for supply chain partners. The main challenge in transfer pricing, is how the supply chain partners can reflect tangible and intangible *value added* within divisions of the supply chain. Several key theories aid our understanding of the importance and relevance of transfer pricing as an appropriate mechanism for measuring value added in supply chains.

Influencing Theories

Resource dependency theory (RDT) (Pfeffer and Salancik, 1978) is based on the premise that organisations are not self sufficient in regard to all critical resources (Heide, 1994). They therefore rely on other organisations to provide key resources such as financial resources, materials, personnel, information and technology resources (Islam, 2003).

Supply chain participants are dependent on the effective and efficient transfer of key resources (through transfer pricing) in order to continue their contribution of adding value along the supply chain. In contrast to RDT, Resource Theory focuses on reducing dependency and maximising the value derived from relationships (Hogan, 1998). Resource theory postulates that the achievement of competitive advantage is possible through the intangible value attained from key collaborative relationships, which also contain tangible value in shared assets (Hunt and Morgan, 1995; Hogan, 1998; Peteraf, 1993). This theory provides justification for supply chain

partners to transfer goods or services from other supply chain participants, rather than obtaining those resources from external markets.

In the transfer pricing function of supply chains it is assumed the purchasing organisation is the principal and the supplier is the agent with the actions affecting the contract being outcome uncertainty, risk aversion, lack of goal congruence and relationship length (Zsidisin and Ellram, 2003). Agency theory explains how contracts can be designed to manage risk and discourage undesirable behaviour by including specific incentives related to bringing together the often divergent interests between the principal and their agents (Godfrey, Hodgson and Holmes, 2003). Incorporating task specific attributes into measurement frameworks can result in more desirable outcomes i.e. a framework which better reflects all types of value added by supply chain partners in transfer prices.

Relational Exchange

Relational exchange is “characterised by long term interaction between firms involving many transactions” (Fontenot and Wilson, 1997, p.6). In the initial stages of understanding of relational exchange, Macneil (1980) and Donaldson and O’Toole (2000), suggested that the existence of relations where parties work together to achieve common goals results in fostering ongoing reliable business. These relationships also benefit from reduced uncertainty and increased exchange efficiency (Dwyer, Schurr and Oh, 1987). Fontenot and Wilson (1997) suggested how intensive relationships can be referred to as; value added partnerships or strategic alliances where the common goal is to develop long term collaborative relationships with an orientation towards achieving both an individual and common goal.

The characteristics that depict relational exchange, cooperation, interdependence, commitment and trust suggest that organisations need to give up a degree of autonomy and be prepared to share resources, and demonstrate their dedication to pursue the development of a relationship (Fontenot and Wilson, 1997; Kumar, 1996; Cann, 1998). This level of inter-firm commitment enhances trust which acts as an important prerequisite to alleviate risk and increase mutual cooperation in a relationship (Schurr and Ozanne, 1985, Smith and Barclay, 1997). Effective

relational exchange between supply chain partners is an increasingly important area, where the value of these relationships plays an important part in the negotiation of transfer prices within supply chains.

What is Value Added?

Value added is “the difference between input cost and output value” (Hines, 2004, p.224). Value added along a supply chain takes the form of tangible goods added and intangible services supplied (Hines, 2004). Value added refers to any additional value created at a particular stage of production by key production factors including; tangible value added through raw material transformation, labour and capital goods and intangible value added through intellectual capital (use of knowledge assets) and relational exchange i.e. the building of collaborative relationships.

Value adding resources within a supply chain are the tangible (processes). Intangible capabilities of a firm (firm attributes, firm controlled information, knowledge and collaborative relationships) enhance efficiency and effectiveness (Varadarajan and Cunningham, 1995).

Tangible Value-added

Baxter and Matear (2004), discuss measurement of tangible value added in transfer pricing as being generally well developed. Extensive discussion of the measurement of the tangible value added component of transfer pricing is therefore unnecessary “because assessment techniques are already available for the tangible part” (Baxter and Matear, 2004, p. 491).

Intangible Value-added

Intangible resources are deemed to have no physical presence and as such measurement difficulties arise when attempting to attach an intrinsic monetary value to intangible components of a transfer. In a supply chain context, intangible value includes value achieved from the management of resources, including intellectual capital and relationship capital (Rylatt, 2003). Intellectual capital is an intangible asset of an organisation which includes; knowledge, information and experience adding value to a firm’s tangible products or processes (Johnson, 2002). Relational capital

describes the importance of strategic alliances, collaborative relationships, business partnerships and knowledge enhancing relationships (Rylatt, 2003), which organisations participate in to create competitive advantage and add value.

In terms of relationship capital Wilson (1995), described five stages of relational development, including one for value creation. He suggested that the value creation stage is a result of the “establishment of mutual goals, input of non-retrievable investments and relationship-specific adaptations to processes and products. This together with strengthening of cooperation and commitment provides a structure through which value can flow” (Baxter and Matear, 2004, p492).

Intangible components must be taken into account within supply chains and transfer prices as “intangible assets are associated with current and future value and with future performance” (Srivastava et al., 2001 as cited by Baxter and Matear, 2004, p493). The value of these intangible resources is not easily measured; therefore a measurement framework is required in order to provide guidance on the management and effective use of the intangible resources (Cassel, Hackl, and Westlund, 2000). The development of such a measurement framework for transfer pricing in supply chains is the focus of this research.

The Balanced Scorecard

The concept of the balanced scorecard is a performance measurement framework. This includes financial measures that look at the results of actions already taken and complement those financial measures with operational (non financial) measures based on customer satisfaction, internal business processes, and the organization's innovation and improvement activities (Kaplan and Norton, 1996). Figure one provides an example of the Balance scorecard depicting the relationship between the organisation and its strategy in the market.

Figure One - The Balanced Scorecard

Financial Measures e.g. - Profit margins - Return on assets - Cashflow	Customer e.g. - Market share - Customer satisfaction index
Internal Business e.g. - Employee retention - Cycle time retention	Innovation and Learning e.g. - percentage of sales from new products

(Source: Anthony and Govindarajan (2004) *Management Control Systems*, McGraw Hill, p.496)

The BSC aims to “foster a balance among different strategic measures in an effort to achieve goal congruence, thus encouraging employees to act in the organisation’s best interest” (Anthony and Govindarajan, p.496). The BSC provides a mix of measurements that accurately reflect the critical factors that will determine the success of the company’s strategy. It also shows the relationships among individual measures in a cause and effect manner and provides a broad based view of the current status of the organisation (Anthony and Govindarajan, 2004).

Kaplan and Norton (1996, p.8) provided links to value creation by stating that it “captures the critical value-creation activities created by skilled, motivated organisational participants”.. This is linked to the value chain approach to supply chain management by Kaplan and Norton (1996) suggesting that value chains incorporate the principal business components of innovation, operations and service. These value chain principles are closely associated with the BSC base measures.

Brewer and Speh (2000) applied the BSC approach to measurement in supply chain management, highlighting how a BSC approach to supply chain management can improve the supply chain through redesigning products and processes, improving collaboration and leveraging the knowledge of supply chain partners, improving information management to compliment decision making and better monitor the external market. The balanced scorecard (BSC) by Kaplan and Norton (1996) is introduced in this paper as a viable basis to develop a framework which assists in the

measurement of tangible and intangible value added in supply chains from the transfer pricing perspective.

Relationship between Key Components and the Gap Identified In Literature

The literature review provides an overview of theories relevant in the development of a framework which reflects tangible and intangible value added in the transfer pricing function of supply chains. Value is the key and common theme throughout the review, with the supply chain coined as a value chain and value system, with the goal of the transfer pricing function being the maximisation of value. Each of the theories reviewed have an overall focus of developing and placing a value on collaborative relationships. Based on the presumptions of those theories Kaplan and Norton's (1996) balanced scorecard was chosen as the base model in the development of a transfer pricing framework within supply chains to reflect tangible and intangible added in transfer prices. The object of the framework is to assist in the recognition and measurement of this value in order to begin to bridge an identified gap in literature and provide a basis for future research in the area.

Theoretical Framework Development

The aim of the following model development is to provide a measurement framework that can be utilised within supply chains and enable the transfer pricing function to reflect both the tangible and intangible value added in resource transfers. The model is based on the previously introduced measurement framework from Kaplan and Norton (1996) – The Balanced Scorecard. This model is deemed appropriate as it has previously been applied in a supply chain context by Brewer and Speh (2000). The measurement framework implemented by the BSC is proposed by Kaplan and Norton (1996) to be linked with value creating activities in that its measures capture the critical value activities created by organisational participants. Due to these propositions the broad measurement framework of the BSC is an appropriate base for reflecting value added in transfer prices.

Figure two is an adaptation of the BSCs basic principles, into a framework for measuring and reflecting value added in transfer pricing while taking into account the issues identified in the literature review.

Figure Two - Balanced Scorecard for Measuring Value Added in Transfer Prices

Financial Tangible resources added <p style="text-align: center;">+</p>	Innovation and Learning Intellectual capital value added <p style="text-align: center;">+</p>
Internal Business Relationship capital value added (seller / buyer) <p style="text-align: center;">- / +</p>	Behaviour Cost of not reducing opportunistic behaviour (seller / buyer) <p style="text-align: center;">- / +</p>

The developed model incorporates measurement bases that account for both tangible and intangible value added in the transfer of resources within the supply chain. The main focus of the model is the intangible components (i.e. innovation and learning, internal business and behaviour) of value which the model measures as assessment techniques that are readily available for the tangible component. The financial portion of the model is the fundamental tangible base of transfer prices and is simply the value of the physical goods or services being transferred between supply chain partners.

Clarifying the key concepts of the model; Intellectual Capital (innovation and learning) refers to experience, information or knowledge resources held by supply chain participants which add an intrinsic value to the tangible resource transferred. Relational Capital (internal business) refers to the value of the collaborative, business and knowledge enhancing relationships between the supply chain partners where the transfer occurs. The final portion of the model is a cost rather than value added, referring to the perceived cost to supply chain participants for failing to account for potential opportunistic or undesirable behaviour by supply chain participants in the design of the transfer pricing system.

The challenge of this model is how the intangible components are measured and subsequently reflected in the negotiation of transfer prices. It is suggested that rather than attempting to place an absolute value on the intangible components, that the economic concept of opportunity cost be used to attach a value to these components to enable their incorporation into transfer prices. The measurement variable of opportunity cost is defined as the cost of a trade-off; that is a resource that is given up in order to gain another. The highest valued alternative is the opportunity cost of the decision made (McTaggart, Findlay and Parkin, 2003). In the context of the model presented in this paper, opportunity cost refers to the costs of giving up, or not taking into account intangible value added in transfer pricing.

To measure the value of intellectual capital for its incorporation into transfer prices; the model views the value in terms of what would be lost if that intellectual capital was not available to the supply chain partner in the creation of the resource being transferred. From a seller's perspective, the opportunity cost is the absolute value of the resource lost if that knowledge and experience is not implemented in the creation of the transferred good or service. From the buyer's perspective, it is the perceived value of the resource that would be lost if the seller did not hold the knowledge and experience in producing the resource. Once the value of the opportunity cost is identified it is added to the base price for the tangible resource to recognise the value added by the intellectual capital implemented in the resources created.

To attach a value to relationship capital (relational exchange) is similar to that implemented to measure the value of intellectual capital. The basic value is obtained by assessing the cost incurred if a mutually beneficial relationship with an intra-organisational supply chain partner was not developed to transfer a key resource between responsibility centres. The loss of value is measured in terms of the lost organisational efficiency if that resource was to be sourced externally. Responsibility centres involved quantify the perceived loss in tangible value assess the opportunity cost of not developing a collaborative relationship with supply chain partners for resource transfers.. These losses are caused by the increases in uncertainty and risk associated with the supply of the resource. From a seller's perspective, the value of

the resource lost by not developing a collaborative relationship within the supply chain would be subtracted from the base transfer price. From a buyer's perspective, it would be added to the base transfer price, this in recognition of the value of the relationship in the supply of the resource.

The final part is the opportunity cost of not creating a transfer pricing framework that reduces the potential for opportunistic behaviour (agency costs). The cost is subtracted from a seller's perspective and added from a buyer's perspective. This will help to promote goal congruence between supply chain members, in that it is aimed to improve both divisional and organisational efficiency by factoring in a cost (value lost) for potential opportunistic behaviour in setting transfer prices within the supply chain.

The framework provides a base valuation for both the buyers and sellers involved in the transfer of goods or services between related supply chain partners. The framework is conceptualised as;

Seller Transfer Price: Tangible resource value + intellectual value – cost of a non mutually beneficial relationship – cost of opportunistic behaviour

Buyer Transfer Price: Tangible resource value + intellectual value + value of a mutually beneficial relationship + the cost of opportunistic behaviour

The balanced scorecard for measuring intangible value in transfer prices provides a framework for incorporating key intellectual and relationship values in transfer prices in supply chains. Used as the conceptual basis for setting transfer prices, the model recognises the value of intellectual capital and the importance of developing effective exchange relationships within the supply chain

Reflections for Internet based Inter-organisational Relationships

To justify valuation and the inclusion of an intangible component, the intangible components need to cause or contribute to the generation of positive returns. Value can only be attached to intangible components (as with tangible components) that

contribute to the generation of positive returns, therefore if they do not generate a return, they are deemed to have no value.

In terms of the justification of whether an intangible component adds value, a supply chain partner can apply a cause and effect opinion on a specific component of a transfer. Kaplan and Norton (1996) suggest that intangible assets seldom directly affect financial outcomes, but rather that intangible assets affect financial outcomes through chains of cause and effect relationships. Such intangible returns may include relational attributes such as trust and information sharing, regarded as important for relationship development.

Applying this concept in the context of justifying the implementation of this framework can be highlighted by using the need to value inter-organisational relationships. First, the organisation needs to ask itself what the cause of a specific relationship existence is, in terms of its requirement in achieving organisational existence. Once this is ascertained they need to look at what effect this relationship has on the final outcome in terms of positive returns. This effect could perhaps be viewed in terms of opportunity cost. That is, if that relationship was not created, would a loss in the value of the transfer occur? This two pronged cause and effect mechanism assists in providing a simple method of assessment as to whether an intangible component adds value, and subsequently if a value should be attached to it within the transfer of goods and services within intra-organisational supply chains. An important implication for organisations that utilise internet services revolves around the mutual dependence that e-commerce has on supply chain relationships and on what these supply chain relationships have with e-commerce.

The world of electronic commerce currently provides organisations the environment and tools to enhance their ability to be more competitive than their competitors. An organisation's ability to adopt and adapt to that environment increasingly means being part of, and contributing to, value adding relationships. Increasingly supply chains are becoming more dependent on internet based intermediaries (McIvor and Humphreys, 2001), who deliver speed, customised service volume and cost transparency (Barratt and Rosdahl, 2002). All as a means to become more competitive by being more

responsive to their customers whilst at the same time, reducing transaction costs in buyer / seller interfaces (Kaplan and Sawhney, 2000).

The framework presented in this paper attempts to capture returns in terms of intangible value generated as the result of investments (financial or otherwise) in intellectual, relationship and behavioural component. The framework also provides firms with a unique mechanism for attaining a competitive advantage and measuring performance by virtue of a framework that specifically characterises the impact of intangible value on organisational returns. This framework, by the nature and definition of the literature reviewed, will compliment and improve organisational and inter-organisational effectiveness and efficiency through the increased awareness of intangible value inherent in intra-business transactions. Being able to measure the worth of relationships provides justification for their ongoing development.

Future Direction

Future direction for this framework includes proposing a method of testing and identification of possible ways for which this framework can be useful for both managers and academia. For managers, this framework will enable better performance because it is an initial step in the direction for creating a more comprehensive framework for setting transfer prices that reflect the true value adding activities of the supply chain participants.

This framework also attempts to capture the often intangible value generated as the result of relationship investment providing firms another mechanism for measuring relationship worth and performance. Having the ability to measure intangible value added relationship characteristics such as trust, will encourage organisations to be more willing participants in the exchange of sensitive information through mechanisms like the internet. In this way, organisations strive to enhance competitive advantage through supply chain relationships. Which by the nature and definition of the literature reviewed, will compliment and improve organisational and inter-organisational effectiveness and efficiency.

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